Ordering number: EN 1831C

Monolithic Digital IC

NO.1831C

SANYO

# LB1205

## High-Voltage, High-Current Darlington Driver

**Functions and Features**

- 4-unit, high-voltage (65V), high-current (1.5A) Darlington driver
- PNP input type (Low active)
- On-chip spark killer diodes
- On-chip input protection diodes
- Capable of being driven directly from 5V-operated CMOS, TTL

**Absolute Maximum Ratings** at Ta=25°C

| | | | | unit |
|---|---|---|---|---|
| Maximum Supply Voltage | $V_{DD}max$ | | 7.0 | V |
| | $V_{CC}max$ | | 62 | V |
| Output Supply Voltage | $V_{o}max$ | | 65 | V |
| Input Supply Voltage | $V_{IN}max$ | $V_{IN}\geq$Gnd | $V_{DD}$-7.0 to $V_{DD}$+10.0 | V |
| Output Current | $I_{o}max$ | | 1.5 | A |
| Spark Killer Diode Forward Current | $I_{Fs}$ | | 1.5 | A |
| Allowable Power Dissipation | Pdmax* | | *1.9 | W |
| Operating Temperature | Topr | | -20 to +75 | °C |
| Storage Temperature | Tstg | | -55 to +150 | °C |
| | | *Mounted on the recommended printed circuit board | 2.6 | W |

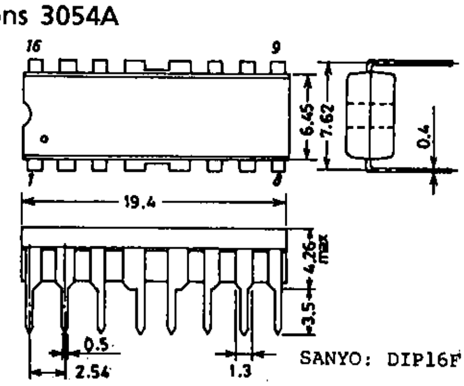
**Allowable Operating Conditions** at Ta=25°C

| | | | | unit |
|---|---|---|---|---|
| Supply Voltage Range | $V_{DD}$ | | 3.0 to 7.0 | V |
| Input "ON" Level Voltage | $V_{INon}$ | $V_{IN}\geq$Gnd,Io=1.0A | $V_{DD}$-7.0 to $V_{DD}$-2.6 | V |
| Input "OFF" Level Voltage | $V_{INoff}$ | Io≦30μA | $V_{DD}$-0.3 to $V_{DD}$+10.0 | V |

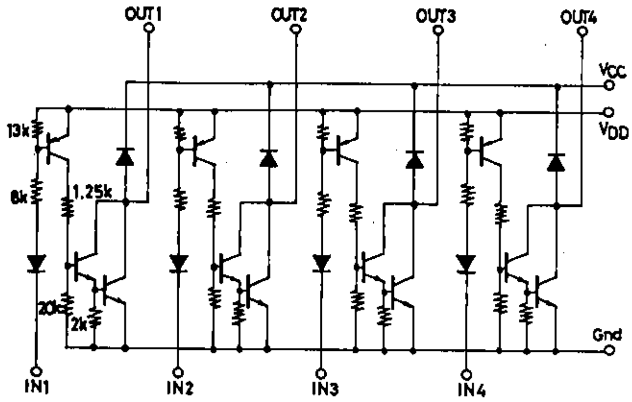
**Electrical Characteristics** at Ta=25°C, $V_{DD}$=5.0V

| | | | min | typ | max | unit |
|---|---|---|---|---|---|---|
| Output Saturation Voltage | $V_{osat1}$ | $V_{IN}$=$V_{DD}$-5.0V,Io=0.5A | | | 1.2 | V |
| | $V_{osat2}$ | " ,Io=1.0A | | | 1.5 | V |
| | $V_{osat3}$ | " ,Io=1.5A | | | 2.0 | V |
| Output Sustain Voltage | $V_{osus}$ | Io=100mA | 65 | | | V |
| Input Current | $I_{IN}$ | $V_{DD}$=7.0V,$V_{IN}$=$V_{DD}$-7.0V | | | 1.0 | mA |
| Spark Killer Diode Forward Voltage | $V_{Fs}$ | $I_{Fs}$=1.5A | | | 3.0 | V |
| Spark Killer Diode Reverse Current | $I_{Rs}$ | $V_{CC}$=62V,Vo=0V | | | 30 | μA |

Package Dimensions 3054A
(unit : mm)

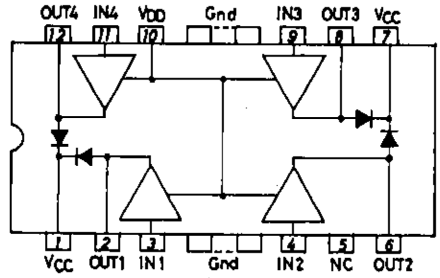


## Equivalent Circuit

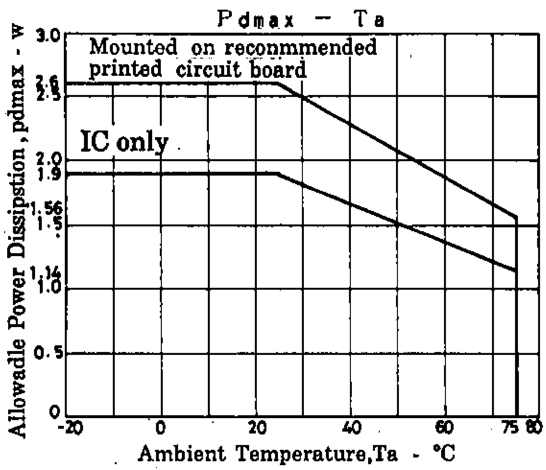



Unit (resistance : Ω)

## Pin Assignment




(Note) $V_{CC}$ (pins 1,9) is shorted internally.




## Recommended Printed Circuit Pattern

